

### **Amendment to the Claims**

1. (Original) A device for forming an array of magnetic particles, the device comprising:  
a substrate comprising a plurality of magnetic regions, wherein the magnetic regions produce a plurality of localized magnetic fields when magnetized, and wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least five times greater than the thermal energy of the particle at room temperature.
2. (Currently amended) The device of claim 1, wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least an order of magnitude greater than the thermal energy of the particle at room temperature.
3. (Currently amended) The device of claim 1, wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least three times greater than the thermal energy of the particle at room temperature.
4. (Currently amended) The device of any of claims 1, 2, or 3, wherein the thermal energy of the particle is approximately 0.025 eV.
5. (Currently amended) The device of any of claims 1, 2, or 3, wherein the localized magnetic fields exist substantially in a volume between adjacent magnetic regions.
6. (Currently amended) The device of any of claims 1, 2, or 3, wherein each of the localized magnetic fields corresponds to a different single magnetic region and exists substantially in a volume between opposite poles of that magnetic region.
7. (Currently amended) The device of any of claims 1, to 4, wherein the magnetic regions project above the surface of the substrate.

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